

### REMARKS

Claims 1-29 remain for consideration. The allowability of claims 9-15 is acknowledged. The claims have been amended, not for purposes of patentability, but pursuant to the objections based on minor grammatical form stated in paragraph 2) of the Office Action, as well as for other minor grammatical errors encountered by the Applicants. All claims are thought to be allowable over the cited art.

The Office Action fails to establish that claims 1, 6, 7 and 16-18 are anticipated under 35 USC §102(b), by "Boni" ("LVDS I/O Interface", April 2001, by Boni). Applicants respectfully traverse the rejections. According to the Office Action, FETs M3 and M4 of Boni correspond to the claimed first and second switchable current sources. However as amended, Applicants' first and second switchable current sources require a "[direct coupling] to the common power supply node", e.g.,  $V_{DD}$ . The "common power supply node" corresponds to, for example,  $V_{DD}$  of FIG. 7 of the instant application, since LVDS driver 14-24 derives its operational power from  $V_{DD}$  as specified by amended Claim 1.

In contrast, Boni precludes the direct coupling of FETs M3 and M4 to the common power supply node (unmarked in FIG. 2 of Boni), since FET  $M_U$  is coupled between FETs M3/M4 and the common power supply node. Referring the Examiner to paragraph [0036] of the instant application, it is noted that a distinction is made between the meaning of direct and indirect coupling. For indirect coupling, intervening components may exist within the meaning of "indirect", while for direct coupling, intervening components may not exist within the meaning of "direct". Since Boni teaches indirect coupling of FETs M3 and M4, via FET  $M_U$ , to the common power supply node and claim 1 sets forth direct coupling of the first and second switchable current sources to the common power supply node, Applicants submit that claim 1 patentably distinguishes over Boni and is in condition for allowance.

Claim 16 similarly sets forth "a switchable current module directly coupled to the common power supply node", the switchable current module including "a first transistor ... and a second transistor ... directly coupled to the common power supply

node". Thus, claim 16 also patentably distinguishes over Boni for at least the reasons given above for claim 1.

Claims 6-7 and 17-18, which depend from independent Claims 1 and 16, respectively, are also rejected under 35 U.S.C. §102(b) as being unpatentable over Boni. While Applicants do not acquiesce with the particular rejections to these dependent claims, it is believed that these rejections are now moot in view of the amendments and remarks made in connection with independent Claims 1 and 16. These dependent claims include all of the limitations of their respective base claims and any intervening claims, and recite additional features which further distinguish these claims from the cited references. Therefore, dependent claims 6-7 and 17-18 are also in condition for allowance.

The Office Action fails to establish that claims 22 and 29 are unpatentable rejected under 35 USC §103(a) over Boni in view of "Feldman" (US patent no. 6,781,445 to Feldman). Applicants respectfully traverse the rejections. In order to establish a *prima facie* case of obviousness, three basic criteria must be met:

- 1) the prior art reference (or references when combined) must teach or suggest all the claim limitations;
- 2) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; and
- 3) there must be a reasonable expectation of success. (M.P.E.P. §2142).

As discussed above, Boni teaches indirect coupling of FETs M3 and M4 to the common power supply node. Similarly, Feldman teaches indirect coupling of FETs M4 and M5 to the common power supply node  $V_{DD}$ , since intervention of FETs M6 and M7 is clearly required as shown in FIG. 4. Since both Boni and Feldman teach indirect coupling, the combination of Boni with Feldman also teaches indirect coupling, which is in contrast to Applicants' independent claims 16 and 23. Thus, the Office Action fails to establish a *prima facie* case of obviousness in relation to criteria 1) above in relation to independent claims 16 and 23.

Dependent claims 22 and 29 necessarily include the "direct coupling" limitations of base claims 16 and 23, and recite additional features which further

distinguish these claims from the combination of Boni and Feldman. Therefore, dependent claims 22 and 29 are also allowable over the combination of Boni and Feldman for at least the same reasons discussed above for claims 16 and 23.

Claims 23-25 stand rejected under 35 USC §103(a), as being unpatentable over Boni.

As discussed above, Boni teaches indirect coupling of FETs M3 and M4, via FET M<sub>U</sub>, to the common power supply node. In particular, the constant current produced by FET M<sub>U</sub> (and FET M<sub>L</sub>) is required to produce the relatively constant V<sub>CM</sub> of 1.25 volts at the common node between resistors R<sub>A</sub> and R<sub>B</sub>. (See page 707 second column discussion relating to FIG. 2). Thus, Boni's FIG. 2 resembles Applicants' prior art FIG. 2 and shares the same deficiency as Applicants' prior art FIG. 2. That is both circuits exhibit deficient supply voltage headroom for the stacked transistors M3/M<sub>U</sub> and M4/M<sub>U</sub>. (See, e.g., paragraph [0004] of the instant application.)

Applicants' invention, on the other hand, reduces by one current source the required structure taught by Boni. In particular, claim 23 sets forth "a load current source operably coupled to sink the first and second currents from the transistor section", while providing "a switchable current module directly coupled to the common power supply node" to produce the first and second currents. Hence, Applicants' claimed structure provides the additional power supply head room, while also providing substantially constant V<sub>CM</sub> (e.g., paragraph [0027] of the instant application).

Thus, whereas Boni requires constant current sources M<sub>U</sub> and M<sub>L</sub>, the present invention eliminates Boni's current source, M<sub>U</sub>, and still provides the same function. Omission of an element (i.e., current source M<sub>U</sub>) and retention of its function (i.e., relatively constant V<sub>CM</sub>) is an indicia of unobviousness (M.P.E.P. § 2144.04, section II-B, citing *In re Edge*, 149 USPQ 556 (CCPA 1966)). Accordingly, Applicants respectfully submit that Claim 23 is allowable in view of Boni.

Claims 24-25 depend from independent claim 23 and are also rejected under 35 U.S.C. §103(a) as being unpatentable over Boni. While Applicants do not acquiesce with any particular rejections to these dependent claims, it is believed that these rejections are now moot in view of the amendments and remarks made in

connection with independent claim 23. These dependent claims include all of the limitations of the base claim and any intervening claims, and recite additional features which further distinguish these claims from the cited references. Therefore, dependent claims 24-25 are also allowable over Boni.

Claims 2-5, 8, 19-22 and 26-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Applicants respectfully submit that Claims 2-5, 8, 19-22 and 26-28 are already allowable in view of the amendments and remarks discussed above.

CONCLUSION

Reconsideration and a notice of allowance are respectfully requested in view of the Remarks presented above. If the Examiner has any questions or concerns, a telephone call to the undersigned is invited.

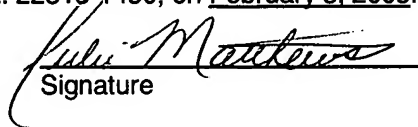
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA. 22313-1450, on February 3, 2005.

Julie Matthews  
Name

  
Signature